National Institute of Environmental Health Sciences

The burgeoning field of transdisciplinary adaptation research in Quebec (1998-): A climate change-related public health narrative

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Abstract:

This paper presents a public health narrative on Quebec's new climatic conditions and human health, and describes the transdisciplinary nature of the climate change adaptation research currently being adopted in Quebec, characterized by the three phases of problem identification, problem investigation, and problem transformation. A transdisciplinary approach is essential for dealing with complex ill-defined problems concerning human-environment interactions (for example, climate change), for allowing joint research, collective leadership, complex collaborations, and significant exchanges among scientists, decision makers, and knowledge users. Such an approach is widely supported in theory but has proved to be extremely difficult to implement in practice, and those who attempt it have met with heavy resistance, succeeding when they find the occasional opportunity within institutional or social contexts. In this paper we narrate the ongoing struggle involved in tackling the negative effects of climate change in multi-actor contexts at local and regional levels, a struggle that began in a quiet way in 1998. The paper will describe how public health adaptation research is supporting transdisciplinary action and implementation while also preparing for the future, and how this interaction to tackle a life-world problem (adaptation of the Quebec public health sector to climate change) in multi-actors contexts has progressively been established during the last 13 years. The first of the two sections introduces the social context of a Quebec undergoing climate changes. Current climatic conditions and expected changes will be described, and attendant health risks for the Quebec population. The second section addresses the scientific, institutional and normative dimensions of the problem. It corresponds to a "public health narrative" presented in three phases: (1) problem identification (1998-2002) beginning in northern Quebec; (2) problem investigation (2002-2006) in which the issues are successively explored, understood, and conceptualized for all of Quebec, and (3) problem transformation (2006-2009), which discusses major interactions among the stakeholders and the presentation of an Action Plan by a central actor, the Quebec government, in alliance with other stakeholders. In conclusion, we underline the importance, in the current context, of providing for a sustained transdisciplinary adaptation to climatic change. This paper should be helpful for (1) public health professionals confronted with establishing a transdisciplinary approach to a real-world problem other than climate change, (2) professionals in other sectors (such as public safety, built environment) confronted with climate change, who wish to implement transdisciplinary adaptive interventions and/or research, and (3) knowledge users (public and private actors; nongovernment organizations; citizens) from elsewhere in multi-contexts/environments/sectors who wish to promote complex collaborations (with us or not), collective leadership, and "transfrontier knowledge-to-action" for implementing climate change-related adaptation measures.

Source: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3180480

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Air Pollution, Ecosystem Changes, Extreme Weather Event, Food/Water Quality, Food/Water Quality, Food/Water Security, Food/Water Security, Glacier/Snow Melt, Meteorological Factors, Precipitation, Sea Level Rise, Solar Radiation, Temperature

Air Pollution: Allergens, Interaction with Temperature, Ozone, Particulate Matter

Extreme Weather Event: Drought, Flooding, Hurricanes/Cyclones, Landslides, Wildfires

Food/Water Quality: Biotoxin/Algal Bloom

Food/Water Security: Fisheries, Food Access/Distribution, Nutritional Quality

Temperature: Extreme Cold, Extreme Heat, Fluctuations

Geographic Feature:

resource focuses on specific type of geography

Arctic, Ocean/Coastal, Urban

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Non-U.S. North America

Health Impact:

specification of health effect or disease related to climate change exposure

Cancer, Cardiovascular Effect, Diabetes/Obesity, Infectious Disease, Injury, Mental Health/Stress, Morbidity/Mortality, Respiratory Effect

Infectious Disease: Foodborne/Waterborne Disease, Vectorborne Disease, Zoonotic Disease

Foodborne/Waterborne Disease: General Foodborne/Waterborne Disease, Giardiasis

Vectorborne Disease: General Vectorborne, Tick-borne Disease

Tick-borne Disease: General Tick-borne Disease

Zoonotic Disease: General Zoonotic Disease

Mental Health Effect/Stress: Mood Disorder

Respiratory Effect: Asthma, Chronic Obstructive Pulmonary Disease, Upper Respiratory Allergy

Intervention:

strategy to prepare for or reduce the impact of climate change on health

A focus of content

Medical Community Engagement: ☑

resource focus on how the medical community discusses or acts to address health impacts of climate change

A focus of content

Mitigation/Adaptation: ☑

mitigation or adaptation strategy is a focus of resource

Adaptation

Model/Methodology: ☑

type of model used or methodology development is a focus of resource

Exposure Change Prediction, Outcome Change Prediction

Population of Concern: A focus of content

Population of Concern: ☑

populations at particular risk or vulnerability to climate change impacts

Elderly, Low Socioeconomic Status

Other Vulnerable Population: Socially isolated; Disabled

Resource Type: ☑

format or standard characteristic of resource

Policy/Opinion

Timescale: ☑

time period studied

Long-Term (>50 years)

Vulnerability/Impact Assessment: ☑

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content